CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

COMPLAINT NO. R2-2006-0028

ADMINSTRATIVE CIVIL LIABILITY
IN THE MATTER OF
SANITARY SEWER OVERFLOWS
EAST BAY MUNICIPAL UTILITY DISTRICT
SPECIAL DISTRICT NO. 1
WET WEATHER FACILITIES
ALAMEDA AND CONTRA COSTA COUNTIES

The Executive Officer of the California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter the "Water Board"), hereby gives notice that:

1. The East Bay Municipal Utility District, Special District No. 1 (hereinafter "Discharger"), has violated provisions of law for which the Water Board may impose civil liability pursuant to California Water Code ("CWC") Sections 13385(a)(2) and Section 13323.

2. On September 21, 2005, the Water Board adopted Order No. R2-2005-0047 (NPDES Permit No. CA0038440) for the Discharger for the purpose of regulating "the intermittent discharge of treated effluents from the Point Isabel, San Antonio Creek and Oakport WWFs" (Order No. R2-2005-0047, Finding 2) during wet weather periods (WWFs are wet weather facilities). Wet weather permits address the periods of wet weather, when, due to the inflow of storm water via inflow and infiltration (I & I) into the imperfectly sealed sewage collection system, the volume of water coming into the treatment plant is greater than the capacity of the plant. Order No. R2-2005-0047 allows for collection, temporary storage, and discharge of treated effluents at three WWFs.

3. The effluent from the Point Isabel WWF discharges to Richmond Inner Harbor. The effluent from the San Antonio Creek WWF discharges to Oakland Inner Harbor. The effluent from the Oakport WWF discharges to East Creek Slough.

4. Order No R2-2005-0047 includes the following discharge prohibition (Discharge Prohibition A.3):

*"Discharge to waters of the state is prohibited except as defined as below:*

*The Discharger shall design, construct and operate its interceptor system and wet-weather treatment facilities to achieve a long-term average of no more than 10 discharges per year per discharge location, for a total of no more than 100 million gallons per year. The numerical design criteria in this prohibition are the long-term goals to be achieved after the East Bay Communities complete their Inflow and Infiltration Correction Program in 2017. These numerical criteria will not be used to determine compliance or non-compliance with this prohibition."*

5. Order No. R2-2005-0047 further includes the following Provision B (Implementation and Enforcement of Prohibition A.3):

*"Compliance with Prohibition A.3 can be demonstrated by compliance with both of the following:*

1. *The April 1988 Wet Weather Facilities Operating and Control Plan, which is consistent with the following objectives:*
   a. *Maximize the volume of wastewater delivered to the main treatment plant consistent with that plant's hydraulic and treatment capacities; and*
   b. *Assure that all wastewater entering the Discharger's interceptor receives treatment prior to discharge (at least floatables removal and disinfection/dechlorination) . . . ."*

6. On December 18, 2005, due mainly to failure of back-up pumps, the Discharger discharged waste into waters of the state from three of its overflow structures, thereby, a) not maximizing the volume of wastewater delivered to the main treatment plant, and b) not treating all wastewater entering the interceptor prior to discharge. Therefore, the Discharger violated Discharge Prohibition A.3 by failing to meet Provision B.

7. Unless waived, a hearing on this Complaint will be held before the Water Board on September 13, 2006, at the Elihu M. Harris State Building, First Floor Auditorium, 1515 Clay Street, Oakland. The Discharger or its representative will have an opportunity to be heard and contest the allegations in this Complaint and the imposition of the civil liability. An agenda for the meeting will be mailed to the Discharger not less than 10 days before the hearing date. The deadline to submit all written comments and evidence concerning this Complaint is August 18, 2006, 5 p.m. Any written comments and evidence not so submitted will not be considered by the Water Board.

8. At the hearing, the Water Board will consider whether to affirm, reject, or modify the proposed civil liability, to refer the matter to the Attorney General for recovery of judicial liability, or take other enforcement actions.

## ALLEGATIONS

9. This Complaint is based on the following facts:

   a. On the morning of Sunday, December 18, 2005, during a storm event that caused high influent flows, the Discharger's Main Wastewater Treatment Plant (MWWTP) lost electrical power, due to the failures of a PG&E feed line and the Discharger's back-up power supply. During the power outage, which lasted approximately 95 minutes, levels in the Discharger's interceptors rose and overflows occurred at three overflow structures.. The Discharger estimates that 9.1 million gallons (MG) of untreated wastewater discharged from the Temescal Creek overflow structure into Central San Francisco Bay; 0.6 MG of untreated wastewater discharged from the Alice Street overflow structure into the Oakland Inner Harbor; and 0.9 MG of untreated wastewater discharged from the Webster Street overflow structure into the Oakland Inner Harbor. A total of 10.6 MG of untreated waste was discharged from the interceptors to waters of the state during this event.

   b. The Discharger's MWWTP's power requirements are supplied by two independent PG&E feed lines (PG&E Line 1 and Line 2) and the treatment plant Power Generation Station (PGS). The MWWTP's power requirements can be met by the PGS and one of the two PG&E lines, with the third representing a redundant supply. An electrician is required to switch between PG&E Line 1 and Line 2; therefore, the Discharger maintains an electrician on standby at all times. The Discharger's power failure plan for the MWWTP calls for electrical power requirements to be reduced to essential components that can be supplied by the PGS alone for a short time until the supply can be switched from one PG&E line to the other.

c. On December 18, 2005, power to the MWWTP was being supplied by PG&E Line 2 and the PGS. The storm event that was passing through the Bay Area at the time had caused increased MWWTP influent flows, which were measured at 243 million gallons per day (MGD) at 5:25 a.m. At this time, the Point Isabel and Oakport WWFs were operating and discharging, and the Discharger was in the process of starting up the San Antonio Creek WWF.

d. At 5:26 a.m., PG&E service from Line 2 was interrupted. (PG&E has categorized the failure as being caused by storm damage.) The Discharger called the standby electrician at 5:30 a.m. to come switch the electrical power feed line to PG&E Line 1. The automatic load shedding process, which is designed to shut down non-essential energy loads in times when the plant is using its emergency back-up power, worked properly. The PGS is itself comprised of three cogeneration engines. The engines are designed to run on diesel fuel, but may be operated with digester gas, as long as they are periodically run on diesel fuel (at a sufficient frequency). The three cogeneration engines at the PGS began supplying the power for a reduced load at the MWWTP. During the load shedding process at 5:39 a.m., the PGS engines unexpectedly switched to 100% diesel fuel, due to the activation of an engine protection auto-safety control. The PGS operator subsequently observed a fuel leak (caused by a plugged diesel injector) on one of the PGS engines. The plugged fuel injector was caused by fouling that occurs when operating on digester gas. This leak necessitated taking the engine out of service to mitigate the associated fire hazard.

e. Upon shutting down the damaged engine, the remaining two engines indicated an overload condition and shut down automatically thereafter. Between 5:39 a.m. and 6:35 a.m., the operator repeatedly attempted to restore power to the essential loads, using the remaining two engines, but was unsuccessful due to circuit interruption. At approximately 6:35 a.m., the stand-by electrician arrived on site. The MWWTP was completely without electrical power until 7:14 a.m. when the stand-by electrician succeeded in switching to PG&E Line 1. Once PG&E Line 1 was connected, the PGS operator was able to restore PGS service using the two working engines as the overload condition was no longer present. In addition, the plugged fuel injector was repaired and the third PGS engine was restored to service approximately an hour later.

f. During the power outage, levels in the interceptors rose high enough to begin overflowing at three points. Overflows were observed between 7:30 a.m. and 8:30 a.m. at the Temescal Creek and Alice Street overflow structures by the Discharger and at the Webster Street overflow structure by the Mariner Square Harbormaster. Later observations made at the three overflow structures between 9:15 a.m. and 10:00 a.m. showed that the overflows had ceased by that time (see Table 1 below). These observations were supported by an analysis of interceptor level monitoring data.

g. By taking known data of interceptor levels and observed flow durations, and assuming a static hydrological model, the Discharger estimated the total volume of the discharge or sanitary sewer overflow (SSO) discharged during this event to be 10.6 MG (see Table 1 below).

h. Compliance with Prohibition A.3 of Order No. R2-2005-0047 can be demonstrated by the Discharger by 1) maximizing the volume of wastewater delivered to the MWWTP, and 2) treating all wastewater that enters the interceptor prior to discharge. The occurrence of overflows and the Discharger's failure to maintain a proper back-up power supply demonstrate that the Discharger failed to maximize the volume of wastewater delivered to the MWWTP. The Discharger also discharged untreated wastewater from its three wet weather overflow structures and thereby failed to treat all wastewater prior to discharge.

i. Because the Discharger is not in compliance with A.3 of Order No. R2-2005-0047 for the December 18, 2005, event, the Discharger is in violation of its waste discharge requirements contained in Order No. R2-2005-0047, for which civil liability may be imposed under CWC Section 13385(a)(2).

Table 1: Estimated Volumes of SSO discharged through Overflow structures

| Location | Station | Time overflow observed | Time no flow observed | Estimated Volume Discharged | Water Body |
|---|---|---|---|---|---|
| Alice Street | OV-1 | 0830 | 1000 | 0.6 MG | Oakland Inner Harbor |
| Webster Street | OV-2 | 0730 | 0930 | 0.9 MG | Oakland Inner Harbor |
| Tesmescal Creek | OV-5 | 0830 | 0915 | 9.1 MG | Central SF Bay |

## PROPOSED CIVIL LIABILITY

10. The Water Board may impose civil liability administratively pursuant to CWC Sections 13385 and 13323 in an amount not to exceed the sum of both the following:

    a. $10,000 for each day in which a violation occurred; and

    b. $10 for each gallon of discharge that is not susceptible to cleanup or is not cleaned up in excess of 1,000 gallons.

    If this matter is referred to the Attorney General for judicial enforcement, a higher liability of $25,000 per day of violation and $25 per each gallon of discharge that is not susceptible to cleanup or is not cleaned up in excess of 1,000 gallons may be imposed.

    The maximum administrative civil liability the Water Board may impose for the violations is $10,000 times 1 day plus $10 times 10,599,000 gallons or $106 million.

11. In determining the amount of civil liability to be assessed against the Discharger, the Water Board must take into consideration the factors described in CWC Section 13385(e). The factors described include:

    - The nature, circumstances, extent, and gravity of the violation or violations,
    - Whether the discharge is susceptible to cleanup or abatement,
    - The degree of toxicity of the discharge,
    - With respect to the discharger, the ability to pay and the effect on ability to continue in business,
    - Any voluntary cleanup efforts undertaken,
    - Any prior history of violations,
    - The degree of culpability,
    - The economic savings, if any, resulting from the violation, and
    - Other such matters as justice may require.

    Nature, Circumstance, Extent and Gravity of the Violations

    Although the Discharger had no control over losing the power from one of the PG&E feed lines, the Discharger should have had a properly working back-up power available. The back-up power system

failed because one of the three cogeneration engines at the Discharger's treatment plant PGS was not properly maintained.

If the back-up power system was properly working, an SSO might still have occurred given the severity of the storm event. Under these conditions the volume of the SSO would have been subject to system capacities, storm flow dynamics and tides and there are too many unknowns and uncertainties to calculate a reliable estimate. However, the volume of the SSO would have been considerably lower, had the back-up power system failure not occurred.

The gravity of the violation associated with this sanitary sewer overflow SSO is significant due to its high volume, 10.6 MG. Also, the discharges did not receive any treatment to protect the beneficial uses of the Oakland Inner Harbor and Central San Francisco Bay. However, due to the delay in sampling (see below) and lack of follow-up investigations, the precise severity and extent of impairment to beneficial uses resulting from the discharges are unknown.

Due to safety concerns during the storm event, the Discharger stated that no sampling of receiving water was conducted on December 18. Based on its rain gauges, the Discharger characterized the storm as exceeding a five-year storm. However, the Discharger collected samples from the receiving water at the Alice and Webster Street overflow structures and at the Oakland Inner Harbor background station the following day on December 19. (No samples were taken in the receiving water near the Temescal Creek overflow structure, because it is not accessible by land or water.) The Discharger analyzed the samples for ammonia, fecal and total coliform, dissolved oxygen, pH and temperature. The Discharger states that there were no significant differences in the pollutant concentrations between the receiving waters and the background station. However, these sampling results reflect the condition of the receiving waters one day after the SSO event. Dilution occurred in the receiving waters during the 24 hours after the SSO event. Therefore, although the sampling analytical results demonstrated no significant differences between the receiving waters and the background station, the receiving waters were likely affected by the SSO. However, the extent is unknown since samples were not taken at the time of the SSO.

Susceptibility of the Discharge to Cleanup or Abatement

The Discharge from the Temescal Creek overflow structure discharged directly into Temescal Creek close to where the creek flows beneath Interstate Highway 880 in Emeryville. This Discharge was not susceptible to cleanup or abatement as the high creek flows carried the wastewater away into Central San Francisco Bay. The Discharges from the Alice Street and Webster Street overflow structures discharged directly into the Oakland Inner Harbor and were also not susceptible to cleanup or abatement as they quickly mixed with the receiving waters.

Degree of Toxicity of Discharge

It is difficult for Water Board staff to accurately pinpoint the direct impacts of the discharge. However, raw sewage, as compared to properly treated wastewater, typically has about ten times the concentrations of biochemical oxygen demand, trash, total suspended solids, oil and grease, ammonia, and thousands of times the levels of bacteria (which is measured in terms of total and fecal coliform) and viruses. These pollutants exert varying levels of impact on water quality, and adversely affect beneficial uses of receiving waters to different extents. Some possible adverse effects on water quality and beneficial uses as a result of sewage overflows include:

- Adverse impact to fish and other aquatic biota caused by bio-solid deposition and oil and grease;

- Creation of a localized toxic environment in the water column as a result of the discharge of oxygen-demanding pollutants that lower dissolved oxygen, and elevated ammonia concentration which is a demonstrated fish toxicant at low concentrations; and
- Impairment to water contact recreation and harm to fish and wildlife as a result of elevated bacteria levels including pathogens.

The Discharger's December 19, 2005, overflow was very large at 10.6 MG. The Discharger estimates that the discharge during the interceptor overflow event consisted of approximately 2.2 MG of sewage mixed with 8.4 MG of rain water that infiltrated through the ground into the collection systems. Because of this, the actual strength of the 10.6 MG wastewater spilled is much less than raw sewage during dry weather, and the discharge was less toxic than if the discharge consisted purely of raw sewage.

Ability to Pay and Ability to Continue Business

The Discharger's 2006 annual operating budget for sewage collection and treatment is approximately $70.9 million, and it will expend $118 million in capital improvement projects over the next five years. As the proposed ACL is a small fraction of the Discharger's planned expenses, Water Board staff considers that the ACL amount will not seriously jeopardize the Discharger's ability to continue operations.

Voluntary Cleanup Efforts Undertaken

The Discharger did not perform any cleanup efforts during or after the SSO event. The day after the SSO event on December 19th, the Discharger reports that there were no floating, suspended or foam materials observed in the receiving waters or deposited on nearby shorelines.

Prior History of Violations

The Discharger has had one other violation associated with its system at the Point Isabel WWF. On December 9 and 10, 2002, the Discharger discharged 1.06 MG of treated wastewater with a chlorine residual of approximately 1.0 mg/L from its Point Isabel WWF to San Francisco Bay. The NPDES permit effluent limit for chlorine residual is 0.0 mg/L. The Discharger has attributed this violation to operator error. The Water Board issued a Notice of Violation on March 11, 2003, and this historic violation is not the subject of the current ACL complaint.

Degree of Culpability

Although the Discharger had no control over losing the power from one of the PG&E feed lines, the Discharger did have a back-up power system. However, the back-up power system failed due to one of the three cogeneration engines at the Discharger's PGS not being properly maintained. The Discharger stated that the plugged injector was caused by fouling that occurs when operating on digestor gas. This engine then had to be pulled out of service due to the fire hazard of a fuel leak caused by the plugged injector. The back-up power system relies on the cogeneration engines working properly. The manufacturer recommends periodically operating the engines on 100% diesel to detect and/or avoid this condition. The Discharger reported that the malfunctioning engine was last run on diesel on November 22, 2005. In response to this event, the Discharger has stated that it has established a practice of weekly operation of its engines on 100% diesel. In any case, Discharger is culpable for the December 18, 2005, discharges for not properly maintaining its back-up power supply.

Economic Savings

There would be some savings to the Discharger from not conducting more frequent maintenance to ensure that the cogeneration engines would properly operate. The savings from not performing the proper maintenance are unknown.

There would also be some savings from not having a stand-by electrician who could respond in less than one hour. The Discharger states that one hour is a normal response time. The savings from not having an on-duty electrician at the treatment plant are unknown.

Other Matters as Justice May Require

The Discharger has been cooperative and responsive to concerns raised by Water Board staff about the SSOs and the investigation.

The Water Board adopted Resolution No. R2-2005-0059 that declares support of local programs that inspect and rehabilitate private sewer laterals. The Resolution also states that the Water Board would consider the existence of such programs, especially those experiencing significant infiltration and inflow from private sewer laterals, as an important factor when considering enforcement actions for SSOs. The District treats wastewater from nine cities and communities in the East Bay area which are comprised of the Cities of Alameda, Albany, Berkeley, Emeryville, Oakland, Piedmont and the Stege Sanitary District (El Cerrito, Kensington and part of Richmond). Each of the cities and Stege Sanitary District owns and operates its own wastewater collection system, which delivers wastewater to the Discharger's interceptor. Although the Cities of Alameda and Albany and the Stege Sanitary District have implemented private sewer lateral programs, the District does not have any financial responsibilities for those individual programs. Therefore, the District does not receive any credit for those private sewer lateral programs.

Staff time to prepare the Complaint and supporting evidence is estimated to be 140 hours. Based on an average cost to the State of $100 per hour, the total cost is $14,000.

12. Based on the above factors, the Executive Officer proposes civil liability be imposed on the Discharger in the amount of $314,000 for the violations cited above, which includes $14,000 in staff costs, and is due as provided below.

13. This action is an enforcement action and is, therefore, exempt from the California Environmental Quality Act, pursuant to Title 14, California Code of Regulations, Section 15321.

14. The Discharger can waive its right to a hearing to contest the allegations contained in this Complaint by (a) paying the civil liability in full or (b) undertaking an approved supplemental environmental project in an amount not to exceed $286,000 and paying the remainder of the civil liability, all in accordance with the procedures and limitations set forth in the attached waiver.

JUL 14 2006

Date

Bruce H. Wolfe
Executive Officer

Attachment: Waiver of Hearing Form

## WAIVER

If you waive your right to a hearing, the matter will be included on the agenda of a Water Board meeting but there will be no hearing on the matter, unless a) the Water Board staff receives significant public comment during the comment period, or b) the Water Board determines it will hold a hearing because it finds that new and significant information has been presented at the meeting that could not have been submitted during the public comment period. If you waive your right to a hearing but the Water Board holds a hearing under either of the above circumstances, you will have a right to testify at the hearing notwithstanding your waiver. Your waiver is due no later than August 18, 2006, 5 p.m.

☐ Waiver of the right to a hearing and agreement to make payment in full.
By checking the box, I agree to waive my right to a hearing before the Water Board with regard to the violations alleged in Complaint No. R2-2006-0028 and to remit the full penalty payment to the State Water Pollution Cleanup and Abatement Account, c/o Regional Water Quality Control Board at 1515 Clay Street, Oakland, CA 94612, within 30 days after the Water Board meeting for which this matter is placed on the agenda. I understand that I am giving up my right to be heard, and to argue against the allegations made by the Executive Officer in this Complaint, and against the imposition of, or the amount of, the civil liability proposed unless the Water Board holds a hearing under either of the circumstances described above. If the Water Board holds such a hearing and imposes a civil liability, such amount shall be due 30 days from the date the Water Board adopts the order imposing the liability.

☐ Waiver of right to a hearing and agree to make payment and undertake an SEP.
By checking the box, I agree to waive my right to a hearing before the Water Board with regard to the violations alleged in Complaint No. R2-2006-0028, and to complete a supplemental environmental project (SEP) in lieu of the suspended liability up to $286,000 and paying the balance of the fine to the State Water Pollution Cleanup and Abatement Account (CAA) within 30 days after the Water Board meeting for which this matter is placed on the agenda. The SEP proposal shall be submitted no later than August 18, 2006, 5 p.m. I understand that the SEP proposal shall conform to the requirements specified in Section IX of the Water Quality Enforcement Policy, which was adopted by the State Water Resources Control Board on February 19, 2002, and be subject to approval by the Executive Officer. If the SEP proposal, or its revised version, is not acceptable to the Executive Officer, I agree to pay the suspended penalty amount within 30 days of the date of the letter from the Executive Officer rejecting the proposed/revised SEP. I also understand that I am giving up my right to argue against the allegations made by the Executive Officer in the Complaint, and against the imposition of, or the amount of, the civil liability proposed unless the Water Board holds a hearing under either of the circumstances described above. If the Water Board holds such a hearing and imposes a civil liability, such amount shall be due 30 days from the date the Water Board adopts the order imposing the liability. I further agree to satisfactorily complete the approved SEP within a time schedule set by the Executive Officer. I understand failure to adequately complete the approved SEP will require immediate payment of the suspended liability to the CAA.

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|---|---|
| Name (print) | Signature |
| Date | Title/Organization |